## **WE CLAIM:**

1. A sterile dialysis concentrate composition for use in a dialysis solution comprising sodium chloride (NaCl) 92.30  $\pm$  9.2 g/l, and magnesium chloride (MgCl2) 2.05 $\pm$ 0.2 g/l.

5

15

30

. 7

- 2. A kit for preparing a dialysis solution comprising the sterile dialysis concentrate composition of claim 1 and optionally instructions for its use.
- 3. The kit of claim 2 further comprising sterile water sufficient to dilute the concentrate to a solution comprising Na 117±11 mmol/l, Mg 0.75±0.07 mmol/l, and Cl 118.5 ± 11 mmol/l.
  - 4. A method of preparing a sterile dialysis solution comprising diluting a sterile, dialysis concentrate composition of claim\_1 in a sufficient amount of sterile water to prepare a dialysis solution comprising Na 117±11 mmol/l, Mg 0.75±0.07 mmol/l, and Cl 118.5 ± 11 mmol/l.
- 5. A method for providing continuous renal replacement therapy to a patient in need thereof comprising administering a sterile dialysis solution prepared according to the method of claim 4 to a patient in need thereof.
- 6. A method for treating acute renal failure in a critically ill patient without introducing calcium into the blood removed from the patient during dialysis comprising administering a sterile dialysis solution prepared according to the method of claim 4 to a patient in need thereof.
  - 7. A method of preparing a sterile infusate comprising diluting a sterile, concentrate composition of claim 1 in a sufficient amount of water to prepare an infusate comprising Na 117±11 mmol/l, Mg 0.75±0.07 mmol/l, and Cl 118.5 ± 11 mmol/l.

A method for providing hemofiltration to a patient comprising 8. administering a sterile infusate prepared according to the method of claim 7 to a patient in need thereof.

A use of sterile calcium-free bicarbonate-free concentrate 9. according to claim 1 for preparing an infusate for hemofiltration.

1.

10. A use of a sterile, calcium-free bicarbonate-free concentrate according to claim 1 for preparing a dialysis solution for use in metabolic acidosis.

10

5

- 11. A sterile dialysis concentrate composition for use in a dialysis solution comprising sodium chloride (NaCl) 211.96 ± 21 g/l, and magnesium chloride (MgCl2) 4.72±0.4 g/l.
- 15 12. A kit for preparing a dialysis solution comprising the sterile dialysis concentrate composition of claim 11 and optionally instructions for its use.
  - 13. The kit of claim 12 further comprising sterile water sufficient to dilute the concentrate to a solution comprising Na 117±11 mmol/l, Mg 0.75±0.07 mmol/l, and Cl 118.5  $\pm$  11 mmol/l.

. 20

- A method of preparing a sterile dialysis solution comprising diluting a 14. sterile, dialysis concentrate composition of claim 11, in a sufficient amount of water to prepare a dialysis solution comprising Na 117±11 mmol/l, Mg  $0.75\pm0.07$  mmol/l, and Cl  $118.5\pm11$  mmol/l.
- A method for providing continuous renal replacement therapy to a 15. patient in need thereof comprising administering a sterile dialysis solution prepared according to the method of claim 14 to a patient in need thereof.

30

16. A method for treating acute renal failure in a critically ill patient without introducing calcium into the blood removed from the patient during dialysis

15

comprising administering a sterile dialysis solution prepared according to the method of claim 14 to a patient in need thereof.

- 17. A method of preparing a sterile infusate comprising diluting a dialysis concentrate composition of claim 11 in a sufficient amount of water to prepare an infusate comprising Na 117±11 mmol/l, Mg 0.75±0.07 mmol/l, and Cl 118.5 ± 11 mmol/l.
- 18. A method for providing hemofiltration to a patient comprising administering a sterile infusate prepared according to the method of claim 17 to a patient in need thereof.
  - 19. A use of sterile calcium-free bicarbonate-free concentrate according to claim 11 for preparing an infusate for hemofiltration.
  - 20. A use of a sterile, calcium-free bicarbonate-free concentrate according to claim 11 for preparing a dialysis solution for use in metabolic acidosis.